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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,103	11/19/2003	Rong Yin	03-C-058	8891

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EXAMINER	
AMAYA, CARLOS DAVID	
ART UNIT	**PAPER NUMBER**
2836	

DATE MAILED: 11/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/717,103	YIN, RONG	
	Examiner	Art Unit	
	Carlos Amaya	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 August 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15 and 21-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *16-20* is/are allowed.

6)☒ Claim(s) *1-3,8,9,15,22 and 23* is/are rejected.

7)☒ Claim(s) *4-7,10-14 and 24-26* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is responsive to amendments filed on 08/23/2006.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 15, 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Bullmore (2004/0051643).

With respect to claim 1 Bullmore discloses a circuit for monitoring the state of at least one switch (monitoring system fig. 2), comprising: a first monitoring circuit (monitoring devices 10, 20 and 30), couple to a switch (monitoring devices are couple to switches SWA, SWB, SWC), comprising: a normally-open detection circuit (electrical circuits A, B and C are configured to detect a normally-open or a normally-closed state of a switch by changing a resistance of the circuit, page 3 paragraph (0040)) for detecting when the switch, if configured as a normally-open switch, closes and generating a first signal based on the detection; and a normally-closed detection circuit for detecting when the switch, if configured as a normally-closed switch, opens and generating a second signal based on the detection (electrical circuits A, B and C, can

detect a close or open condition of a switch by a change in resistance in the circuit, thus the electrical circuits function as a normally-open detection circuit and as a normally-closed detection circuit, page 3 paragraph (0042), page 4 paragraph (0052)); and a configuring circuit (centralized SMS control unit 5), coupled to the first monitoring circuit, for configuring the first monitoring circuit to utilize one of the normally-open detection circuit and the normally- closed detection circuit based on the switch configuration (as shown in figure 2 the monitoring devices communicate with the control unit 5).

With respect to claim 15 Bullmore discloses the circuit of claim 1, wherein the circuit further comprises: a second monitoring circuit (monitoring devices 20 and 30), coupled to a second switch (SWB, SWC), comprising: a second normally-open detection circuit for detecting when the second switch, if configured as a normally-open switch, closes and generating a third signal based on the detection; and a second normally-closed detection circuit for detecting when the second switch, if configured as a normally-closed Switch, opens and generating a fourth signal based on the detection (electrical circuits B and C are configured to detect a normally-open or a normally-closed state of second and third switches by changing a resistance of the circuit, page 3 paragraph (0040)), wherein the configuring circuit is coupled to the second monitoring circuit, for configuring the second monitoring circuit to utilize one of the second normally-open detection circuit and the second normally-closed detection circuit based on the second switch configuration (as shown in figure 2 the monitoring devices communicate with the control unit 5 providing a second and third signals).

With respect to claim 21 Bullmore discloses a system, comprising: a switch having a first conduction terminal and a second conduction terminal (SWA, SWB and SWC have a first conduction terminal as shown in figure 2); a first circuit coupled to the first conduction terminal of the switch for detecting the switch opening; a second circuit coupled to the first conduction terminal of the switch for detecting the switch closing (monitoring devices 10, 20 and 30 act as the first and second circuit, because the monitoring devices are able to check a switch opening or closing); a third circuit (centralized SMS control unit 5) coupled to the first circuit and the second circuit for activating one of the first circuit and the second circuit and deactivating the other of the first circuit and the second circuit based on whether the switch is a normally-closed switch or a normally-open switch, respectively (control unit 5 controls the operation of each of the switches by controlling the monitoring devices, thus the control unit based on the state of the switches is able to control the monitoring devices and the switches to change state).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 2-3, 8-9,22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bullmore (2004/0051643) in view of Youssef (US 6,861,955).

With respect to claim 2 Bullmore discloses the circuit of claim 1, except for pulling a first terminal of the switch to a voltage representative of one of a logic high state and a logic low state.

Youssef discloses in Figure 2 a First circuit 12 (third circuit) for detecting the opening and closing of switch 20 and for pulling terminal 21 of switch 20 to logic low (ground) or logic high (power supply), Column 3 lines 21-23, lines 27-29. It would have been obvious at the time the invention was made to have combined the Bullmore circuit for detecting the opening and closing of a switch with Youssef circuit invention for pulling a terminal of the switch to a logic high state and a logic low state.

The suggestion or motivation for doing so would have been to improve the reliability and operability of the switch and to make sure the switch and the circuits are giving the right output based on the detection of the switch.

With respect to claim 3 Bullmore in view of Youssef discloses the circuit of claim 2, wherein the closed-to-open circuit is configurable for pulling the first terminal of the switch to a voltage representative of a logic high state and to a logic low state Youssef (Column 3 lines 21-23, lines 27-29).

With respect to claim 8 Bullmore in view of Youssef discloses the circuit of claim 1, wherein the normally-open detection circuit includes a open-to-closed circuit for detecting whether the switch changes from an open state to a closed state and for relatively weakly pulling a first terminal of the switch towards a voltage representative of one of a logic high state and a logic low state. As discussed in claim 2 above Youssef discloses a first circuit 12 for detecting the opening and closing of switch 20 and for

pulling a terminal to ground or to a power supply. For the purpose of improving the reliability and operability of the switch and to make sure the switch and the circuits are giving the right output based on the detection state of the switch.

With respect to claim 9 Bullmore in view of Youssef discloses the circuit of claim 8, wherein the open-to-closed circuit is configurable for pulling the first terminal of the switch to a voltage representative of a logic high state and to a logic low state (Column 3 lines 21- 23, lines 27-29).

With respect to claim 22 Bullmore discloses the system of claim 21. However, Bullmore does not disclose expressly that the activated circuit is configurable to selectively pull the first conduction terminal of the switch towards a voltage level representative of a logic high state, and to selectively pull the first conduction terminal of the switch towards a voltage level representative of a logic low state. As disclosed by Youssef in one of the claims above, Figure 2 shows a circuit 12 for detecting the opening and closing of switch 20 and for pulling terminal 21 of switch 20 to logic low (ground) or logic high (power supply), Column 3 lines 21-23, lines 27-29.

It would have been obvious at the time the invention was made to have combined the Bullmore circuit for detecting the opening and closing of a switch with Youssef circuit invention for pulling a terminal of the switch to a logic high state and a logic low state.

The suggestion or motivation for doing so would have been to improve the reliability and operability of the switch and to make sure the switch and the circuits are giving the right output based on the detection of the switch.

With respect to claim 23 Bullmore in view of Youssef discloses the system of claim 22, except for activated circuit selectively weakly pulls the first terminal of the switch towards a pre-selected logic state, relative to a drive strength of the switch to pull the first terminal thereof towards a different logic state. Youssef (Column 3 lines 12-15, 21- 23 and lines 27-29).

Allowable Subject Matter

6. Claims 16-20 are allowed.

7. Claim 16 is allowable over the prior art of record, because the prior art of record does not disclose "configuring a circuit, couple to a switch, based on whether the switch is a normally open switch or a normally closed switch and activating a normally-open detection circuit and deactivating a normally-closed detection circuit if the switch is a normally-open switch; and activating the normally-closed detection circuit and deactivating the normally- open detection circuit if the switch is a normally-closed switch". Along with the remaining of the claim.

8. Claims 4-7, 10-14, 24-26 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

9. Applicant's arguments with respect to claims 1-3, 8-9, 15, 21-23 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Amaya whose telephone number is (571) 272-8941. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (571)272-2800. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CA

Chau Nguyen

CHAU N. NGUYEN
PRIMARY EXAMINER